WHAT IS CLAIMED IS:

1. A method to eliminate interference occupying at least one part of the spectrum of one or more signals received by a network of N sensors, the method comprising at least the following steps:

- subdividing each sample x_i of signals into K frequency bands,
- weighting the samples x_{ik} obtained by subdivision, with weighting coefficients w_{ik} determined by power inversion processing,
- combining the different weighted coefficients $w_{ik}.x_{ik}$ by given frequency band index k to obtain signals s_k corresponding to $\sum_{i=1}^{N} w_{ik}.x_{ik}$, and then carrying out the combination of the signals s_k for the totality of the bands K.

2. A method according to claim 1 wherein the power inversion processing is, for example, of the CRPA type.

3. A method to eliminate the interferences occupying a part of the spectrum of a signal received by a network comprising N sensors, wherein the method comprises at least the following steps :

- digitizing the signals s_i received by the sensors in N digital samples x_i,
- transmitting the x_i digital samples to K filters G_k in order to subdivide each sample x_i into K frequency bands,
- applying the x_{ik} samples obtained by subdivision to :
  - a computation unit adapted to determining the weighting coefficients w_{ik}, by power inversion processing,
  - a processing block adapted to :
    - combining the different weighted coefficients $w_{ik}.x_{ik}$ for a given filter index k in order to obtain signals s_k corresponding to $\sum_{i=1}^{N} w_{ik}.x_{ik}$,
    - combining the signals s_k in order to obtain a signal S' that is totally or mostly free of interference.

4. A method according to claim 3 wherein the subdivision step uses an FIR type filter.

5. A method according to one of the claims 1 to 4, comprising a step for filtering the dynamic range of the coefficients coming from the computation unit.

6. A use of the method according to one of the claims 1 to 5 or of the device according to claim 7 to 10 for the elimination of interference in a signal sent by a satellite and received by a GPS receiver.

7. A device to eliminate interferences in one or more signals s_i received by a network of N sensors comprising at least one set of means adapted to subdividing each sample x_i of signals into K frequency bands, weighting the samples x_{ik} obtained by subdivision with weighting coefficients obtained by power inversion processing, combining the different weighted coefficients $w_{ik}.x_{ik}$ by given frequency band index k in order to obtain signals s_k corresponding to $\sum_{i=1}^{N} w_{ik}.x_{ik}$, combining the signals s_k for the totality of the bands K.

8. A device according to claim 7 wherein the power inversion processing is a CRPA type processing.

9. A device according to claim 7 comprising at least:

- one signal reception chain comprising circuits for the frequency transposition of the frequency of the initial signal to an intermediate signal and an ADC to convert the signal S into N digitized samples,
- a device adapted to subdividing each digitized signal x_i, into K frequency bands, in order to give N*K samples x_{ik},
- a computation unit receiving the N*K samples and suited to determining weighting coefficients w_{ik}, by power inversion processing,
- a processing block receiving the weighting coefficients w_{ik} and the samples x_{ik}, said block being suited to the application of the weighting coefficients to the different samples, carrying out the combination firstly for a given index k of the x_{ik} weighted samples with k of varying from 1 to K and secondly the K signals s_k with k varying from 1 to K, in order to obtain a signal S'.

10. A device according to one of the claims 7 or 9, wherein the means for subdividing the samples into K frequency bands is formed by a set of K FIR type filters.

11. A device according to one of the claims 7 to 10, comprising a device to filter the dynamic range of at least one of the weighting coefficients such as a Kalman filter.

12. An application of the device according to one of the claims 7 to 10 to eliminate the interferences in the signals sent by a satellite and received by a GPS receiver or again by a spread-spectrum positioning system or again a spread-spectrum navigation and communications system.